AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 10/533,211
Filing Date: April 28, 2005
Title: IMPROVEMENTS IN AND RELATING TO FINGERPRINT SEARCHING

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## REMARKS

This responds to the Office Action mailed on June 12, 2007.

Claims 1, 3-4, 6, 12 and 15 are amended, claims 9-11 are canceled, and claims 16-26 are added; as a result, claims 1-8 and 12-26 are now pending in this application.

### *Examiner Interview*

Applicant thanks Examiner for the telephone interview conducted on September 18, 2007. In the course of the interview, an agreement has been reached that amendments to claims clarifying that a first fingerprint block is associated with a first position, the further fingerprint block is associated with a second position, where the first position is distinct from the second position would distinguish the claims from Cano et al. ( "Robust Sound Modeling for Song Detection in Broadcast Audio"). The amendment would distinguish the claims from Cano at least because, in Cano, after an exact match is determined for a short sequence, a longer sequence is matched next, *starting at the position of the exact match.*

### *§102 Rejection of the Claims*

Claims 1-3, 6-8 and 12-15 were rejected under 35 U.S.C. § 102(b) for anticipation by Cano et al. (IDS filed 4/13/2006, "Robust Sound Modeling for Song Detection in Broadcast Audio").

Cano describes matching a short subsequence with a fingerprint in the database, and then finding a match for a longer sequence. The two sequences that are the subjects of the matching operations are associated with the same position. The technique in Cano is described as follows.

If an identical subsequence is found, the matching result will be stored in a balanced tree data structure for further processing steps. One node of this tree contains a list of exact matching results of one title. Only results appearing in the right chronological order will be appended to a node. In addition the time length information is used to discard non-

promising nodes. If a node contains a certain amount of exact matching results, *an approximate matching method is applied to detect similarities of longer sequences starting at the position of the exact matches.*

Cano, page 5, the right column, under a subheading "Matching Process," emphasis added.

In contrast, claim 1 recites "the first fingerprint block associated with a first position in the input set of fingerprint blocks," "finding a first matching fingerprint block in said database that matches the first fingerprint block," and "selecting a further fingerprint block from said set of input fingerprint blocks, **the further fingerprint block associated with a second position in the input set of fingerprint blocks relative to the first position associated with said first fingerprint block, the second position being distinct from the first position.**"

Furthermore, in the method of amended claim 1, a matching block in the database is identified *based on the match* between the first block and the matching block ("finding a first matching fingerprint block in said database that matches the first fingerprint block"). A further block from the input blocks is selected at a certain position and, this time, a corresponding block in the database is identified *based on its position* in the database ("locating a corresponding fingerprint block in said database at a position corresponding to the second position in the set of fingerprint blocks"). This technique is not disclosed or suggested in Cano.

Because Cano fails to disclose or suggest each and every element of claim 1, claim 1 and its dependent claims are patentable and should be allowed.

Claim 12, as amended, recites "a processing unit arranged to select a first fingerprint block of said set of input fingerprint blocks, the first fingerprint block associated with a first position in the input set of fingerprint blocks; find a first matching fingerprint block in said database that matches the first fingerprint block; select a further fingerprint block from said set of input fingerprint blocks, the further fingerprint block associated with a second position in the input set of fingerprint blocks relative to the first position associated with said first selected fingerprint block, the second position being distinct from the first position; locate a corresponding fingerprint block in said database at a position corresponding to the second

position in the set of fingerprint blocks." Thus, claim 12 and its dependent claims are patentable and should be allowed at least for the reasons articulated with respect to claim 1.

## §*103 Rejection of the Claims*

Claims 5 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cano as applied to claim 1 above, and further in view of Burges et al. (U.S. 7,082,394).

Burges is directed at extracting features from a set of representative training data such that the features extracted will be robust to both distortion and noise when used for feature classification, retrieval, or identification tasks involving an input signal. (Burges, 2: 58-62.) Burges, whether considered separately or in combination with Cano fails to disclose or suggest "the first fingerprint block associated with a first position in the input set of fingerprint blocks," "finding a first matching fingerprint block in said database that matches the first fingerprint block," and "selecting a further fingerprint block from said set of input fingerprint blocks, the further fingerprint block associated with a second position in the input set of fingerprint blocks relative to the first position associated with said first fingerprint block, the second position being distinct from the first position." These features are present in claims 5 and 6 by virtue of their being dependent on claim 1. Because Burges, whether considered separately or in combination with Cano, fails to disclose or suggest each and every element of claims 5 and 6, claims 5 and 6 are patentable and should be allowed.

## RESERVATION OF RIGHTS

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference.

Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

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## CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 408-278-4052 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

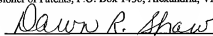Respectfully submitted,

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Date _October 1, 2007_ By _____

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 1st, day of October 2007.

Dawn R. Shaw _____

Name

Signature